

REMARKS

Claims 1, 6-9 and 14-16 were reported in the Office Action as pending. Claims 1, 6-9 and 14-16 are rejected. Claims 6-8 and 14-16 have been amended to remove references to cancelled claims. Claims 2-5 and 10-13 are cancelled. Claims 1, 6-9 and 14-19 remain.

Applicant requests reconsideration of the application in view of the following remarks.

It is asserted in the Office Action that Claims 6-8 and 14-16 are objected to due to informalities. Claims 1 and 9 are rejected under 35 U.S.C. §103(a) as being unpatentable over Applicant Admitted Prior Art (“AAPA”) in view of Behzad Razavi, *RF Transmitter Architectures and Circuits*, IEEE 1999 Custom Integrated Circuits Conference, pp. 10.1.1 – 10.1.8 (“Razavi”). Claims 6-8 and 14-16 are rejected under 35 U.S.C. §103(a) as being unpatentable over AAPA in view of Razavi and further in view of U.S. Patent No. 6,658,261 issued to Winters et al. (“Winters”).

In response to the above objections and rejection of record, Claims 6-8 and 14-16 have been amended to overcome the objections to the claims. Applicant notes that in this Action, the Examiner rejects Claims 1 and 9 under 35 U.S.C. §103(a) as being unpatentable over AAPA in view of newly cited Razavi. No amendments are presented in response to the prior art rejections. In the prior Action, the Examiner rejected Claims 1 and 9 under 35 U.S.C. §103(a) as being unpatentable over AAPA in view of U.S. Patent No. 5,828,954 issued to Wang (“Wang”). In response to the prior Action, Claims 1 and 9 were amended to provide that first and second RF up-converting means are provided for directly up-converting first and second analog signals corresponding to filtered in-phase (I) and filtered quadrature (Q) signals into first and second RF signals. It was pointed out that according to the invention, as distinguished over Wang, the RF up-converting unit directly converts analog I and Q signals without passing through an intermediate frequency band, unlike Wang, which requires first up-converting to an IF signal.

Applicant's invention is best shown in FIG. 5 in which filtering unit 540 provides I and Q signals to a pair of corresponding digital analog converters, the outputs of which are provided to corresponding I and Q up-converters. That is, the invention is directed to an I and Q filter, an I and Q digital-analog converter pair, and an I and Q up-converter pair and then an adder. The AAPA, on the other hand, uses a digital to analog converter placed after the up-converted I and Q signals have been added together to form a single signal, which is provided to the digital to analog converter.

In citing Razavi, the Examiner relies upon FIGS. 6 and 16 and the corresponding description at page 200. However, FIG. 16 appears to be directed to an analog only system and, therefore, there is no digital to analog conversion of the I and Q signals at all. Although FIG. 6 does refer to the use of a digital to analog converter, the starting point as to FIG. 6 is a square baseband pulse; i.e., a digital signal. A ROM is used to map each baseband pulse to a desired shape, which is then provided to the digital to analog converter. That is, there is no concern at all with respect to processing of I and Q signals.

Thus, adding the teachings of Razavi to AAPA would simply replace most of FIG. 3 of AAPA, except for DAC 370 with the illustrated ROM of Razavi. As to FIG. 16, since there is no suggestion that any digital signals are involved, it does not appear that FIG. 16 has any relevance at all to the present invention.

Accordingly, Applicant submits that the claims pending for examination, namely Claims 1, 6-9 and 14-19, are now in condition for allowance, which early action is requested.

If there are any additional fees due in connection with the filing of this response, please charge those fees to our Deposit Account No. 02-2666. If a telephone interview would expedite the prosecution of this Application, the Examiner is invited to contact the undersigned at (310) 207-3800.

Respectfully submitted,

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